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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,588	06/01/2001	Hitoshi Fukushima	04783-026002	9233

27572 7590 04/10/2002
HARNESS, DICKEY & PIERCE, P.L.C.
P.O. BOX 828
BLOOMFIELD HILLS, MI 48303

EXAMINER

TRAN, MY CHAU T

ART UNIT	PAPER NUMBER
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1641

DATE MAILED: 04/10/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/870,588

Applicant(s)

FUKUSHIMA ET AL.

Examiner

My-Chau T. Tran

Art Unit

1641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/163,199.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 ✓
- 4) ☒ Interview Summary (PTO-413) Paper No(s) 7
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Pending Claims

1. Claims 27-32 are **now** claims 12-17 and claims 12-17 are **now** claims 18-23. The pending claims for this application are 11-23. See the phone interview summary attached.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/163,199, filed on 09/30/1998.

Drawings

3. The drawings are objected to because "I/J" of figure 1 and 2 must be spelled out in order for those ordinary skills in the art to understand what applicant means. To overcome this problem, it is suggested that the specification be amended to specify that "I/J" in the figures refer to "ink-jet".
4. New formal drawings are required in this application because a new clean copy of the amended figure 3 is needed. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

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Specification

5. An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification (37 CFR 1.78). Therefore in the first sentence of the specification, applicant should state that this application is a divisional of 09/163,1999 and claim foreign priority to Japan Patent 9-266,225. Appropriate correction is required.

6. Although specific claims are cited in the rejections below, these rejections are also applicable to all other claims in which the recited problems or language occur.

The disclosure is objected to because of the following informalities:

a) "Claim 1" was referred to at page 4, line 22. It is best to avoid any confusion caused by referring to a particular claim in the specification since the claim can be amended and the numbering changed. In this case claim 1 was canceled in the preliminary amendment.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 11-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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- a) It is unclear what is meant by the claim 11 term “organic thin film.” This term would include wetting the surface of the electrode with corrosive organic acids or non-conductive organic solvents, which would be inappropriate for the practice of the invention. The language of claim 1 does not “particularly point out and distinctly claim” the invention as it is set forth at page 4 of the specification.
- b) The terms “one dot” in claim 12 and “micro-dot” in claim 13 and 16 are relative terms that render the claims indefinite. These terms are not defined by the claims and the specification does not provide a standard for ascertaining the requisite degree. That is, what is the size of the “one dot” or “micro-dot”?
- c) In claim 14, there is no antecedent in claim 12 for the term “the dot”.
- d) In claim 16-17, there is no antecedent in claim 15 for the term “the dot”.
- e) The term “capable of” in claim 11 is vague and indefinite. It is unclear if the device actually does what it is claimed. Can the transducing element actually transduce the information?
- f) Claim 11 is vague and indefinite in that it is unclear whether it is claiming a device or a method step. The method step is how the organic film is formed. From the preamble, it is claiming a device.
- g) Claim 11 is indefinite in not defining the spatial arrangement of the required elements of the device. The enabling description of the invention as set forth in the specification requires a specific configuration (see fig. 1 or page 7, line 7-10).

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 11 is rejected under 35 U.S.C. 102(b) as being anticipated by Cozzette et al. (US Patent 5,200,051).

Cozzette et al. disclose a sensor device (biosensor) that comprises an electrode and an organic film (semipermeable film) which is a polymer (Abstract; col. 14, line 20-25). The transducing element (electrode) would produce a signal from the film (col. 12, line 30-37; col. 19, line 31-39). The organic film is printed (dispensed) onto the electrode (col. 15, line 40-42; col. 26, 36-55). The Cozzette et al. device include^s all of the required elements of the device of the instant claim 11.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claims 12-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cozzette et al. (US Patent 5,200,051).

Cozzette et al. disclose a sensor device (biosensor) that comprises an electrode and an organic film (semipermeable film) which is a polymer (Abstract; col. 14, line 20-25). The transducing element (electrode) would produce a signal from the film (col. 12, line 30-37; col. 19, line 31-39). The organic film is printed (dispensed) onto the electrode (col. 15, line 40-42; col. 26, 36-55). The organic film forms a dot shape area (col. 15, line 40-55; col. 26, line 49-52). The solution is a silicone-base agent (silane mixture) and a solvent (organic solvent) (col. 26; line 56-59; col. 27, line 3-9).

Cozzette et al. differs from the claimed invention in failing to specifically identify the parameters of claims 12-23.

However, the features of the dependent claims constitute obvious variations in parameters which are routinely modified in the art (e.g. type of film and type of solvent) and which have not been described as critical to the practice of the invention. Such modifications are considered to be routine optimizations of the conventional components of known sensor devices.

15. Claims 11-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heller et al. (US Patent 5,605,662) in view of Johnson (US Patent 4,216,245).

Heller et al. disclose an electronic sensor device (abstract). The device includes a microelectrode (DC mode microelectrode) and an organic film (permeation layer) (col. 9, line 18-20). The transducing element (electrode) would produce a signal from the film (col. 9, line 61-67; col. 10, line 31-43).

Heller et al. differs from the claimed invention in failing to specifically teach that the organic film is printed onto the surface of the electrode, which form dots.

Johnson teaches a technique of printing the organic thin film (reagent) on an electrode (matrix) in microdot format (col. 2, line 13-22).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Heller et al. by including the technique of printing the organic thin film onto the electrode as taught by Johnson for the well known advantage of providing a rapid method of applying the organic film to the electrode in a manner which prevents interaction.

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The features of remaining dependent claims constitute obvious variations in parameters which are routinely modified in the art (e.g. solvent type or type of film) and which have not been described as critical to the practice of the invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to My-Chau T. Tran whose telephone number is 703-305-6999. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long V. Le can be reached on 703-305-3399. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-4242 for regular communications and 703-872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

mct
April 5, 2002

Mary E. Ceperley
MARY E. CEPERLEY
PRIMARY EXAMINER
Au1641